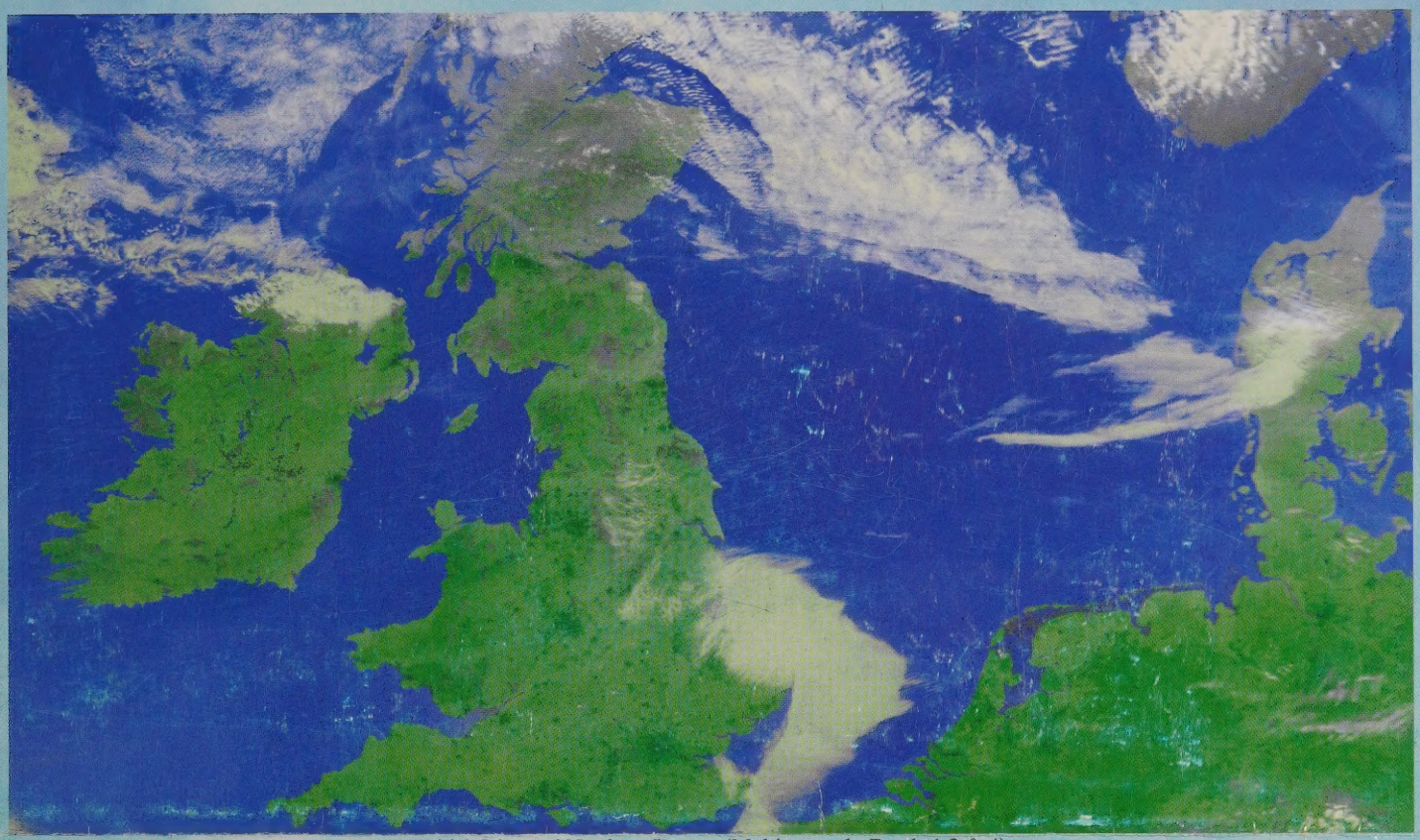
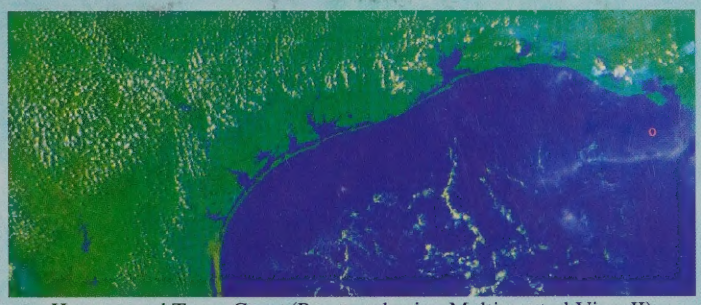
Timestep



British Isles and Northern Europe (Multispectral : Bands 1,2 & 4)

Heat Emissions from Power Stations in Illinois, USA



Houston and Texas Coast (Processed using Multispectral View II)

HRPT

AVHRR HRPT

Advanced Very High Resolution Radiometer - High Resolution Picture Transmission - the titles say it all! Quite simply, HRPT is the ultimate in amateur remote sensing; no other system even comes close. Now, incredibly, HRPT is easily within the grasp of any amateur. Stunning images resolving 1.1km ground resolution are available in your home, classroom or university. Rivers, towns, cities, mountain ranges, lakes and even power stations can be seen with this system. Cloud resolution is very high; cloud types can easily be identified.

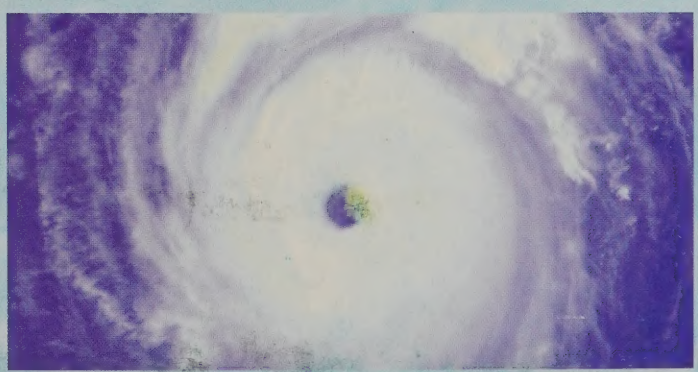
10 bit images in 5 spectral bands are available. In one single pass, over 80MB of data can be collected. The user friendly, intuitive mouse driven HRPT software has many features such as: latitude and longitude gridding, political boundaries, real time pan and zoom, contrast stretch, temperature readout and more. Images can be exported into Windows in BMP format and also into the innovative Timestep Multi Spectral View II 24 bit colour image processor for stunning true colour images. All of the data transmitted is stored for analysis by other platforms or systems if required.

Really low cost systems enable anyone to take part. For beginners it is not necessary to track the dish automatically. Manual control by watching the signal strength meter is easy and cost effective.

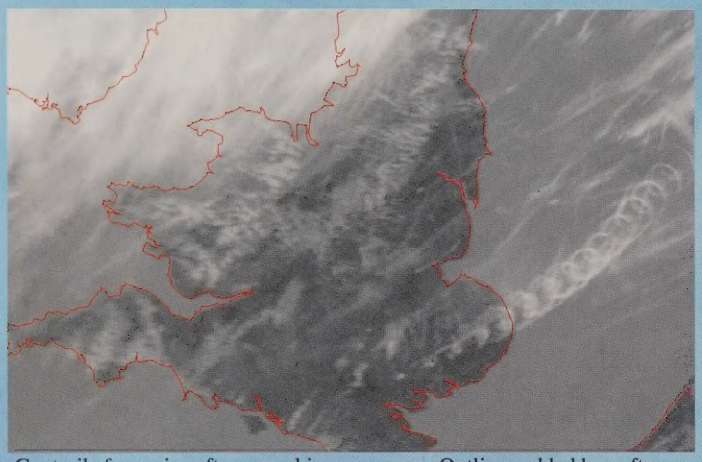
10 Bit Software

The NOAA AVHRR sensors transmit 10 bit data. Software that only receives 8 bits throws away a lot of information. 8 bit software resolves 256 intensity levels; 10 bit software resolves 1024 levels. Since the satellites rarely achieve their full dynamic range this ability is very important.

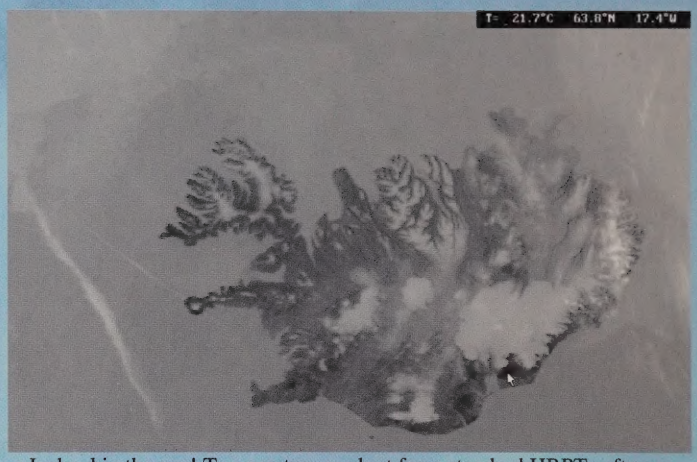
The software will automatically recover from any signal failure or dish mistracking. This means you always get a usable image.



Hurricane Andrew (Processed using Multispectral View II)



Contrails from aircraft engaged in war games. Outlines added by software



Iceland in the sun! Temperature readout from standard HRPT software

The Timestep HRPT System

The Timestep HRPT system will work perfectly from a tiny 3 foot perforated dish. We can offer this completely ready to go system made from aluminium and stainless steel designed to look good and last. The ground stand is self supporting and made from galvanised steel. The complete assembly is just 5 foot tall and will blend naturally into any garden or back yard.

The system resolves full 10 bit data at 1.1 km resolution in all the 5 bands listed below :-

Band	Wavelength μm	Usage
1	0.58 - 0.68	General purpose visible for cloud and surface mapping. Biased towards green/yellow and gives very good land detail in the Summer.
2	0.725 - 1.10	Surface water delineation. Biased from red to near infrared. A good general purpose visible sensor that gives surprisingly good land detail even in winter.
3	3.55 - 3.93	Sea surface temperature and night time cloud mapping. Can give extremely accurate temperature readout over a relatively narrow range (-15 to +30 deg C). Shows land detail from thermal data.
4	10.5 - 11.5	Sea surface mapping and day/night cloud mapping. A good general purpose infrared channel for every day use. Rivers are visible in winter due to their temperature differential.
5	11.5 - 12.5	Sea surface mapping, otherwise somewhat similar to band 4.

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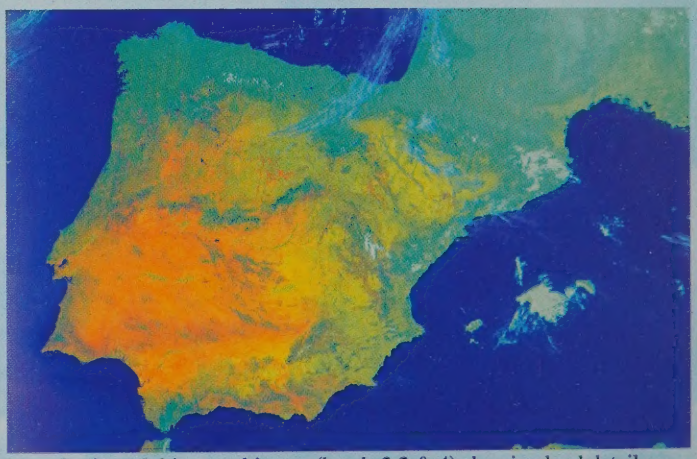
The small tracking dish, mount and positioner

HRPT receiver, tracking controller and interface

Computer requirements
386 or better (486 DX recommended)
Fast hard drive
Mouse (Microsoft compatible)
Super VGA
Free 16 bit bus slot

System Parts
3 foot (90 cm) dish and ground stand
90 degree combiner and cables
Yaesu R5400 positioner
80 foot (25m) positioner cables
Positioner interface and software
P-HEMT Preamplifier
65 foot (20m) signal cable
65 foot (20m) extension and line amp
6 channel HRPT receiver
HRPT PC card

Spain : Multispectral image (bands 1,2 & 4) showing cloud detail



Spain : Multispectral image (bands 3,2 & 4) showing land detail

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